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Application Case Study: Damper Automation Retrofit for Semiconductor Scrubber Yards

A semiconductor manufacturer came to Genesis Systems looking for a better way to control their existing dampers in their scrubber yards. The existing dampers were used in the acid, caustic, VOC and general exhaust systems to isolate the fans during maintenance and emergency shutdowns. The dampers ranged in diameter from 36" up to 120". Maintaining the exhaust systems pressure was crucial to the operation of the tools in the fab area and therefore the dampers needed to actuate with very precise control. The customer was unable to get the control they needed using an on/off cylinder driven by hydraulic fluid. The existing assemblies had limited control options, very high maintenance costs and did not allow the operators to easily manually override the damper in case of power loss.

A sales engineer at Genesis designed a new automation package that was pneumatically driven and incorporated a digital electro-pneumatic positioner for tighter accuracy and control of the damper position. The assembly included an integral declutchable manual override that could be engaged and disengaged while the system was online without interruption. The unit also included fail-safes for loss of power and air supply so that the damper would fail in its last position until an operator was able to engage the manual override. The combination of these quarter-turn automation controls allowed the customer to gain infinite control and speed of their damper operation while enhancing their reliability and lower maintenance costs. These damper automation packages also allowed the customer to safely manually operate the dampers without the risk of bumping the fab.

This is another example how Genesis Systems combines years of valve automation experience with a willingness to do whatever it takes in order to exceed our customer's valve and valve automation requirements and expectations. Contact Genesis Systems if you would like us to provide a knowledge based solution for your damper automation needs.

If you would like additional information on this application or any of our other specialty valve or valve automation packages, please contact our office directly or visit our web site to locate your Genesis Systems Territory Manager.